



ABBREVIATED DESCRIPTIONS OF METAMORPHIC MAP UNITS
(See text for more detailed information)

SOUTHERN PRINCE OF WALES ISLAND AND ADJACENT ISLANDS

- GNS (OG)
+ LPP (DS)
- Greenschist-facies greenschist, greenstone, schist, phyllite, marble, and minor metapelite rocks**—Protholiths are Late Proterozoic and (or) Cambrian in age. Metamorphism was Late Cambrian and Early Ordovician in age. A younger (greenschist-facies) metamorphism during Silurian and earliest Devonian time is inferred to have also affected this unit.
- AMP (OG)
+ LPP (DS)
- Amphibolite-facies schist and gneiss**—Protholiths are Late Proterozoic and (or) Cambrian in age. Metamorphism was Late Cambrian and Early Ordovician in age. A younger (greenschist-facies) metamorphism during Silurian and earliest Devonian time is inferred to have also affected this unit.
- LPP (DS)
- Weakly metamorphosed metasedimentary rocks, metavolcanic rocks, metapelite rocks, metachert, and metalmestone**—Protholiths are Ordovician and Silurian in age. Metamorphism occurred during Silurian and earliest Devonian time.
- GNS (DS)
- Greenschist-facies greenschist, semischist, phyllite, slate, and metalmestone**—Protholiths are Ordovician and Silurian in age. Metamorphism occurred during Silurian and earliest Devonian time.
- GNS (DS)
+ GNS (K)
- Polymetamorphosed greenschist- and locally epidote-amphibolite-facies greenschist, greenschist, and metalmestone**—Protholiths are Ordovician and Silurian in age. The earlier metamorphism occurred during Silurian and earliest Devonian time, and the later metamorphism sometime during mid- or early Late Cretaceous time.

GLACIER BAY AND CHICHAGOF AND BARANOF ISLANDS AREA

- AMP (eKf)
- Amphibolite- or hornblende-hornfels-facies amphibolite, gneiss, schist, marble, and granulite**—Protholiths are pre-Jurassic in age. Metamorphism occurred sometime during Paleozoic to Early Cretaceous time.
- GNS (eKf)
- Greenschist-facies schist, phyllite, slate, metalmestone, and minor quartzite**—Protholiths are presumed to be Silurian to Permian in age. Metamorphism occurred sometime during latest Triassic to Early Cretaceous time.
- AMP (eKf)
- Amphibolite-facies gneiss, amphibolite, schist, and minor phyllite and marble**—Protholiths are presumed to be Silurian to Permian in age. Metamorphism occurred sometime during latest Triassic to Early Cretaceous time.
- GNS (eKf)
- Greenschist-facies metabasalt and minor argillite, metapelite, metalmestone, and metalmestone**—Protholiths are Late Triassic to Early Cretaceous in age. Metamorphism occurred sometime during latest Triassic to Early Cretaceous time.
- LPP (eKf)
- Weakly metamorphosed metasedimentary and metavolcanic rocks, metalmestone, and metachert**—Protholiths consist of Silurian and (or) Devonian, Mississippian, Permian, and Early Jurassic(?) age. Metamorphism occurred sometime during Early Jurassic(?) to Early Cretaceous time.
- AMP (eK)
- Amphibolite-facies and hornblende-hornfels-facies schist, gneiss, and marble**—Unit also includes minor amount of greenschist and greenschist. Protholiths are Silurian and Devonian in age. Metamorphism is interpreted to have taken place during late Early Cretaceous plutonism.
- LPP/GNS (eKf)
- Transitional prehnite-pumpellyite- to greenschist-facies greenschist, greenschist, marble, and underlying metasedimentary and metavolcanic rocks**—Protholiths include Paleozoic and (or) Mesozoic rocks and overlying rocks of presumed Late Triassic age. Metamorphism occurred sometime during Late Triassic to early Tertiary time.
- LPP/GNS (eKf)
- Undifferentiated prehnite-pumpellyite- and lower greenschist-facies metasedimentary and metavolcanic rocks**—Unit comprises metamorphosed flysch and melange consisting of phyllite, metagraywacke, argillite, metaconglomerate, metachert, metalmestone, greenschist, and greenstone. Protholiths are probably Cretaceous in age; melange blocks are Triassic(?), Late Jurassic, and Early Cretaceous in age, and melange matrix is interpreted to be, in part, Late Jurassic in age. Metamorphism occurred sometime during Late Jurassic to early Tertiary time.

- LPP/GNS (eKf)
+ GNS (eK)
- Polymetamorphosed rocks containing albite-epidote hornfels-facies assemblages superimposed over prehnite-pumpellyite- to greenschist-facies assemblages**—Unit consists of metasedimentary rocks, amphibolite, greenschist, and schist. Protholiths are probably Cretaceous in age, but blocks within an area considered to be melange are Triassic(?), Late Jurassic, and Early Cretaceous in age, and the melange matrix is interpreted to be, in part, Late Jurassic in age. Regional low-grade metamorphism occurred sometime during Late Jurassic to early Tertiary time; subsequent low-pressure thermal metamorphism accompanied early Tertiary (Eocene) plutonism.
- LPP/GNS (eKf)
+ GNS (eK)
- Polymetamorphosed rocks containing hornblende-hornfels-facies assemblages superimposed over prehnite-pumpellyite- to greenschist-facies assemblages**—Unit includes metagraywacke and slate hornfels, schist, and gneiss. Protholith and metamorphic history are the same as described immediately above.
- GNS/AMP (eKf)
- Transitional greenschist- to amphibolite-facies schist, semischist, and amphibolite**—Protholiths are probably Cretaceous in age. Metamorphism occurred sometime during Cretaceous and (or) early Tertiary time.
- AMP (eKf)
- Amphibolite-facies gneiss, schist, and amphibolite**—Protholiths are probably Cretaceous in age. Metamorphism occurred sometime during Cretaceous and (or) early Tertiary time.
- LPP (eKf)
- Laumontite-quartz- and (or) prehnite-pumpellyite-facies upper Mesozoic metasedimentary and mafic meta-igneous rocks**—Unit consists of melange containing large blocks of greenstone, phyllite, metagraywacke, argillite, and metachert; bedded sequences of slate, metalmestone, and greenstone; and altered diorite. Metamorphism occurred during latest Cretaceous and (or) early Tertiary time.

WESTERN METAMORPHIC BELT

Admiralty Island and adjacent mainland area

- LPP (eK)
- Prehnite-pumpellyite facies metasedimentary and metavolcanic rocks, metachert, and minor metalmestone**—Protholiths are Ordovician and Permian through Early Cretaceous in age. Metamorphism is considered to be late Early Cretaceous in age.
- GNS (eK)
- Greenschist-facies phyllite, greenschist, greenstone, slate, marble, metagraywacke, and minor migmatite and schist**—Protholiths are Ordovician to Early Cretaceous in age. Metamorphism is considered to be late Early Cretaceous in age.
- GNS/AMP (eK)
- Undifferentiated greenschist- and amphibolite-facies schist, hornfels, metachert, marble, slate, phyllite, amphibolite, gneiss, and migmatite**—Protholiths are Ordovician to Early Cretaceous in age. Metamorphism is considered to be late Early Cretaceous in age.
- Kupreanof, Etolin, and Revillagigedo Islands and Cleveland Peninsula area
- LPP/GNS (eK)
- Prehnite-pumpellyite- to lower greenschist-facies greenschist, greenstone, metasedimentary rocks, metalmestone, and metachert**—Protholiths are Late Jurassic to mid-Cretaceous in age. Metamorphism is mid-Cretaceous in age.
- LPP/GNS (eK)
+ GNS (eK)
- Polymetamorphosed greenschist, metasedimentary rocks, and greenstone**—Protholiths are presumed to be Late Jurassic to mid-Cretaceous in age. Rocks were regionally metamorphosed under prehnite-pumpellyite- to greenschist-facies conditions during mid-Cretaceous time, then subsequently metamorphosed under low-pressure evolving to intermediate-pressure greenschist-facies conditions during early Late Cretaceous time.
- GNS (K)
- Greenschist-facies metasedimentary, metavolcanic, and sparse metapelite rocks**—Protholiths range in age from Late Silurian to Cretaceous. Metamorphism occurred sometime during mid- or early Late Cretaceous time.
- AM (eK)
- Intermediate-pressure amphibolite-facies schist, gneiss, and minor marble and migmatite**—Protholiths range in age from Permian(?) to Cretaceous(?). Metamorphism is interpreted to have been associated with the intrusion of early Late Cretaceous plutons.

Mainland Belt

- GNS (eKf)
- Greenschist-facies metatuff, semischist, phyllite, marble, and metapelite rocks**—Protholiths are Late Paleozoic to Late Jurassic in age. Metamorphism occurred sometime during Late Jurassic to early Tertiary time.
- GNS (eKf)
+ GNS (eK)
- Polymetamorphosed greenschist-facies schist, semischist, phyllite, slate, metalmestone, and granulite**—Protholiths are Permian(?), Triassic, Jurassic(?), and Cretaceous(?) in age. Earlier metamorphism occurred during early Late Cretaceous time, and later metamorphism occurred during latest Cretaceous and (or) early Tertiary time.
- LPP (eKf)
- Prehnite-pumpellyite-facies metatuff, metagraywacke, metapelite, and metapelite rocks**—Protholiths include Lower(?) Cretaceous fossiliferous rocks and mid-Cretaceous plutonic rocks. Metamorphism occurred during latest Cretaceous and (or) early Tertiary time.
- GNS (eKf)
- Intermediate-pressure greenschist-facies phyllite, slate, schist, and greenstone**—Protholiths are Permian(?), Triassic, Jurassic(?), and Cretaceous(?) in age. Metamorphism occurred during latest Cretaceous and (or) early Tertiary time.
- GNS/AMP (eKf)
- Undifferentiated greenschist- and amphibolite-facies phyllite, slate, greenstone, schist, gneiss, and migmatite**—Protholiths are Permian(?), Triassic(?), Jurassic(?), and Cretaceous(?) in age. Metamorphism occurred during latest Cretaceous and (or) early Tertiary time.
- AM (eKf)
- Amphibolite-facies schist, gneiss, and migmatite**—Protholiths are Permian(?), Triassic(?), Jurassic(?), and Cretaceous(?) in age. Metamorphism occurred during latest Cretaceous and (or) early Tertiary time.
- AM/L (eKf)
- Intermediate- to low-pressure amphibolite-facies migmatite, paragneiss, schist, orthogneiss, and minor marble, quartzite, and amphibolite**—Protholiths are Paleozoic and (or) Mesozoic in age; at least one plutonic protholith is Early Cretaceous in age. Metamorphism occurred during latest Cretaceous and (or) early Tertiary time.

METAMORPHIC FACIES MAP OF SOUTHEASTERN ALASKA

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